



## UPDATE ON ISOFLAVONES IN MENOPAUSE

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Isoflavones are components of soyfood, red clover, or hops extracts. Soyfood contains 12 different isoflavones, mainly genistein, daidzein, and glycitein. The association between an increased uptake of isoflavones and a reduced frequency of menopausal hot flushes was first described in 1992, based on a lower incidence of hot flushes in countries with a higher consumption of soy. Since then, numerous clinical trials with various sources of isoflavones have been presented; many of the studies with adequate design delivering an outcome in favor of isoflavone supplementation 1.

Preclinical studies have also revealed evidence that isoflavones may be beneficial in women with cardiovascular risk factors, such as higher blood pressure, abdominal obesity, serum lipids, triglycerides, glucose, and inflammatory markers. The results of a meta-analysis in postmenopausal women showed that isoflavone significantly improves glucose control and insulin sensitivity in postmenopausal women 2. Isoflavones exhibit antioxidant and anti-inflammatory properties. Increasing evidence has highlighted the potential for isoflavones to prevent chronic diseases in which inflammation plays a key role 3.

Menopause is also associated with increased bone resorption and decreased bone mineral density (BMD). Isoflavones are believed to prevent bone loss and probably have beneficial effects on bone health in menopausal women 4.

Concerning safety of isoflavones, an in-depth risk assessment of the European Food Safety Authority (EFSA 2015) concludes that the amply available human data does not indicate any harmful effects from a potential interaction of isoflavones with hormone-sensitive tissues in the mammary gland, the uterus and the thyroid gland. Safety was ascertained with long-term intake of up to 150mg isoflavones per day ingested for the duration of at least 3 years.

1. Messina M. Soy and Health Update: Evaluation of the Clinical and Epidemiologic Literature. *Nutrients*. 2016,24,8

2. Yang Liu, et al. The effect of genistein on glucose control and insulin sensitivity in postmenopausal women: A meta-analysis. *Maturitas* 2017,97, 44

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3. Yu J. et al. Isoflavones: Anti-Inflammatory Benefit and Possible Caveats. *Nutrients*. 2016,10,8
- Abdi F. et al. Effects of phytoestrogens on bone mineral density during the menopause transition: a systematic review of randomized, controlled trials. *Climacteric*. 2016,19,535